

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently amended) A pattern formation method comprising the steps of:

forming a resist film;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying, onto said resist film, an immersion solution including a material having an affinity with a developer ~~a nonaqueous solution including water~~; and

forming a resist pattern by developing said resist film after the pattern exposure.

2. (Currently amended) A pattern formation method comprising the steps of:

forming a ~~positive~~ resist film of a ~~chemically amplified resist material including an acid generator for generating an acid through irradiation with light~~;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying, onto said resist film, a nonaqueous solution including a ~~compound for generating water in the presence of an acid~~; and

forming a resist pattern by developing said resist film after the pattern exposure.

3. (Currently amended) A The pattern formation method of Claim 2 comprising the steps of:

~~wherein said forming a~~ chemically amplified resist material ~~includes a compound for generating water in the presence of an acid~~ including an acid generator for generating an acid through irradiation with light;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying, onto said resist film, an immersion solution including a compound for generating a material having an affinity with a developer in the presence of an acid; and

forming a resist pattern by developing said resist film after the pattern exposure.

4. (Currently amended) A The pattern formation method ~~comprising the steps of~~ Claim
3,

~~forming a positive resist film;~~

~~performing pattern exposure by selectively irradiating said resist film with exposing light while supplying, onto said resist film, a nonaqueous solution including an acid generator for generating an acid through irradiation with light and a compound for generating water in the presence of an acid; and~~

~~forming a resist pattern by developing said resist film after the pattern exposure~~

wherein said chemically amplified resist material includes a compound for generating a material having an affinity with a developer in the presence of an acid.

5. (Currently amended) A pattern formation method comprising the steps of:

forming a resist film;

~~forming a positive resist film of a chemically amplified resist material including an acid generator for generating an acid through irradiation with light;~~

~~forming, on said resist film, a water-soluble film including a compound for generating water in the presence of an acid;~~

~~performing pattern exposure by selectively irradiating said resist film with exposing light while supplying, onto said resist film, an immersion~~ a nonaqueous solution onto said water-soluble film including an acid generator for generating an acid through irradiation with light and a compound for generating a material having an affinity with a developer in the presence of an acid; and

~~forming a resist pattern by developing said resist film after the pattern exposure.~~

6. (Currently amended) ~~The~~ A pattern formation method comprising the steps of: ~~Claim~~
~~5,~~
forming a chemically amplified resist material including an acid generator for generating
an acid through irradiation with light;
forming, on said resist film, a water-soluble film including a compound for generating a
material having an affinity with a developer in the presence of an acid;
performing pattern exposure by selectively irradiating said resist film with exposing light
while supplying an immersion solution onto said water-soluble film; and
forming a resist pattern by developing said resist film after the pattern exposure
~~wherein said nonaqueous solution includes a compound for generating water in the~~
~~presence of an acid.~~

7. (Currently amended) The pattern formation method of Claim 6 ~~5~~,
wherein said ~~chemically amplified resist material~~ immersion solution includes a
compound for generating a material having an affinity with a developer ~~water~~ in the presence of
an acid.

8. (Currently amended) ~~A~~ The pattern formation method of Claim 6, wherein said
chemically amplified resist material includes a compound for generating a material having an
affinity with a developer in the presence of acid ~~comprising the steps of:~~
~~forming a positive resist film;~~
~~forming, on said resist film, a water-soluble film including an acid generator for~~
~~generating an acid through irradiation with light and a compound for generating water in the~~
~~presence of an acid;~~

~~performing pattern exposure by selectively irradiating said resist film with exposing light while supplying a nonaqueous solution onto said water-soluble film; and~~

~~forming a resist pattern by developing said resist film after the pattern exposure.~~

9. (Currently amended) A ~~The~~ pattern formation method comprising the steps of: ~~Claim~~ 8,

forming a resist film;

forming, on said resist film, a water-soluble film including an acid generator for generating an acid through irradiation with light and a compound for generating a material having an affinity with a developer in the presence of an acid;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying an immersion solution onto said water-soluble film; and

forming a resist pattern by developing said resist film after the pattern exposure

~~wherein said nonaqueous solution includes a compound for generating water in the presence of an acid.~~

10. (Currently amended) The ~~A~~ pattern formation method of Claim 9, comprising the steps of: wherein said immersion solution includes a compound for generating a material having an affinity with a developer in the presence of acid

~~forming a positive resist film of a chemically amplified resist material including an acid generator for generating an acid through irradiation with light and a compound for generating water in the presence of an acid;~~

~~performing pattern exposure by selectively irradiating said resist film with exposing light while supplying a nonaqueous solution onto said resist film; and~~

~~forming a resist pattern by developing said resist film after the pattern exposure.~~

11. (Currently amended) ~~A~~ The pattern formation method of Claim 10, comprising the steps of:

forming a chemically amplified resist material including an acid generator for generating an acid through irradiation with light and a compound for generating a material having an affinity with a developer in the presence of an acid;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying an immersion solution onto said resist film; and

forming a resist pattern by developing said resist film after the pattern exposure

~~wherein said nonaqueous solution includes a compound for generating water in the presence of an acid.~~

12. (Currently amended) The pattern formation method of Claim 11 ~~any of Claims 1, 2, 4, 5, 8 and 10~~, wherein said ~~nonaqueous~~ immersion solution includes a compound for generating a material having an affinity with a developer in the presence of an acid ~~is perfluoropolyether.~~

13. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 ~~1, 2, 4, 5, 8 and 10~~,

wherein said exposing light is KrF excimer laser, ArF excimer laser, F₂ laser, KrAr laser, or Ar₂ laser.

14. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein a material having an affinity with a developer ~~water~~ is added to said nonaqueous solution.

15. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is an onium salt, a halogen-containing compound, a diazoketone compound, a diazomethane compound, a sulfone compound, a sulfonic ester compound or a sulfonimide compound.

16. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9, and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is an onium salt selected from the group consisting of diphenyliodonium triflate, triphenylsulfonium triflate and triphenylsulfonium nonaflate.

17. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a halogen-containing compound selected from the group consisting of 2-phenyl-4,6-bis(trichloromethyl)-s-triazine and 2-naphthyl-4,6-bis(trichloromethyl)-s-triazine.

18. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a diazoketone compound selected from the group consisting of 1,3-diphenyldiketo-2-diazopropane, 1,3-dicyclohexyldiketo-2-diazopropane and an ester of 1,2-naphthoquinonediazido-4-sulfonic acid and 2,2,3,4,4'-tetrahydroxybenzophenone.

19. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a diazomethane compound selected from the group consisting of bis(trifluoromethylsulfonyl)diazomethane, bis(cyclohexylsulfonyl)diazomethane, bis(phenylsulfonyl)diazomethane, bis(p-tolylsulfonyl)diazomethane and bis(p-chlorophenylsulfonyl)diazomethane.

20. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a sulfone compound selected from the group consisting of 4-trisphenacylsulfone, mesitylphenacylsulfone and bis(phenylsulfonyl)methane.

21. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a sulfonic ester compound selected from the group consisting of benzoin tosylate, 2,6-dinitrobenzyl tosylate, 2-nitrobenzyl tosylate, 4-nitrobenzyl tosylate and pyrogallol trimesylate.

22. (Currently amended) The pattern formation method of any of Claims 3, 5, 6, 9 and 11 ~~2, 4, 5, 8 and 10~~,

wherein said acid generator is a sulfonimide compound selected from the group consisting of *N*-(trifluoromethylsulfonyloxy)succinimide, *N*-(trifluoromethylsulfonyloxy)phthalimide, *N*-(trifluoromethylsulfonyloxy)diphenylmaleimide, *N*-(trifluoromethylsulfonyloxy)bicyclo[2.2.1]hepto-5-en-2,3-dicarboxylimide, *N*-(trifluoromethylsulfonyloxy)-7-oxabicyclo[2.2.1]hepto-5-en-2,3-dicarboxylimide, *N*-(trifluoromethylsulfonyloxy)bicyclo[2.2.1]heptane-5,6-oxy-2,3-dicarboxylimide, *N*-(trifluoromethylsulfonyloxy)naphthylldicarboxylimide, *N*-(camphorsulfonyloxy)succinimide, *N*-(camphorsulfonyloxy)phthalimide, *N*-(camphorsulfonyloxy)diphenylmaleimide, *N*-(camphorsulfonyloxy)bicyclo[2.2.1]hepto-5-en-2,3-dicarboxylimide, *N*-(camphorsulfonyloxy)-7-oxabicyclo[2.2.1]hepto-5-en-2,3dicarboxylimide, *N*-(camphorsulfonyloxy)bicyclo[2.2.1]heptane-5,6-oxy-2,3dicarboxylimide, *N*-(camphorsulfonyloxy)naphthylldicarboxylimide, *N*-(4-methylphenylsulfonyloxy)succinimide, *N*-

(4-methylphenylsulfonyloxy)phthalimide, *N*-(4-methylphenylsulfonyloxy)diphenylmaleimide, *N*-(4-methylphenylsulfonyloxy)bicyclo[2.2.1]hepto-5-en-2,3-dicarboxylimide, *N*-(4-methylphenylsulfonyloxy)-7-oxabicyclo[2.2.1]hepto-5-en-2,3-dicarboxylimide, *N*-(4-methylphenylsulfonyloxy)bicyclo[2.2.1]heptane-5,6-oxy-2,3-dicarboxylimide and *N*-(4-methylphenylsulfonyloxy)naphthyldicarboxylimide.

23. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 2 through 11,

wherein said material having an affinity with a developer compound is a tertiary alcohol, a diol of a tertiary alcohol, a secondary alcohol or a diol of a secondary alcohol.

24. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 2 through 4 and 6 through 11,

wherein said material having an affinity with a developer compound is a tertiary alcohol selected from the group consisting of t-butanol and 2-methyl-2-butanol.

25. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 2 through 11,

wherein said material having an affinity with a developer compound is a diol of a tertiary alcohol selected from the group consisting of 3-methyl-1,3-butandiol and benzopinacol.

26. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 2 through 11,

wherein said ~~compound~~ material having an affinity with a developer is a secondary alcohol selected from the group consisting of 2-propanol, 2-butanol and 2-methyl-3-butanol.

27. (Currently amended) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11 2 through 11,

wherein said material having an affinity with a developer compound is a diol of a secondary alcohol selected from the group consisting of 3-methyl-1,2-butandiol and 2,4-pentanediol.

28. (Currently amended) The pattern formation method of Claim 6 or 9 ~~5 or 8~~, wherein said water-soluble film is a polyvinyl alcohol film or a polyvinyl pyrrolidone film.

29. (New) The pattern formation method of any of Claims 1, 2, 3, 5, 6, 9 and 11, wherein said immersion solution is perfluoropolyether or water.